



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/086,231	02/27/2002	Bradley F. Bowden	SP01-331	7797
22928	7590	02/17/2004	EXAMINER	
CORNING INCORPORATED			LOPEZ, CARLOS N	
SP-TI-3-1			ART UNIT	
CORNING, NY 14831			PAPER NUMBER	
			1731	

DATE MAILED: 02/17/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/086,231

Applicant(s)

BOWDEN ET AL. 

Examiner

Carlos Lopez

Art Unit

1731

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-41 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-6, 8, 11-14, 16-27, 30, 31, 33-34, 37-38, and 40 is/are allowed.
- 6) ☒ Claim(s) 7, 9, 15, 28, 29, 32, 35, 36, 39 and 41 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
- a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). ____.
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 6/19/02. 6) ☐ Other: .

DETAILED ACTION

Specification

The specification is objected to as failing to provide proper antecedent basis for the claimed subject matter. See 37 CFR 1.75(d)(1) and MPEP § 608.01(o). Correction of the following is required: In claim 16 and 17, the claimed sintering of the porous pre-form at a temperature of above 1000⁰C and at approximately 1400⁰C. In claims 25-27, the claimed different casting methods.

Claim Objections

Claim 35-36 and 39 objected to because of the following informalities: Claims 35 and 39 do not end in a period. In claim 36 at line 2, grammar error, deletion of "a" is suggested. Appropriate correction is required.

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claim 10 is rejected under 35 U.S.C. 112, first paragraph, because the specification, while being enabling for casting with a mold having a porous glass substrate, does not reasonably provide enablement for an additionally both a glass substrate and a porous glass substrate. The specification does not enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the invention commensurate in scope with these claims. The specification only

Art Unit: 1731

discloses one glass substrate referred in claim 1 as being the porous glass substrate, element 404 in figure 4. The specification does not disclose an additional mold having a glass substrate as recited in claim 10.

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 7, 9, 15, 32, 35, 36, 39 and 41 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. In claim 7, the term "the high temperature" lacks antecedent basis. In claim 9, the term "the step of drying" lacks antecedent basis.

In claim 15, the term "the step of heating" lacks antecedent basis.

In claim 32, the term "the impurities" at lines 6 and 7 lack antecedent basis.

In claim 35 and 39, it is unclear what predetermined temperature is lower than a sintering temperature when there is no reference to what is being sintered. Additionally, the term "the step of heating" lacks antecedent basis.

In claim 36, the term "the impurities" at lines 7 and 8 lack antecedent basis.

In claim 41, it is unclear what is the relationship between the mold where the cullet is disposed and the mold used for vacuum casting the slurry.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claim 28 is rejected under 35 U.S.C. 102(b) as being anticipated by Mortiz et al (US 5,866,062). Mortiz provides a glass aggregate mixed with water to form a slurry (Col. 6, lines 20ff). The claimed pressure casting into a mold is disclosed in Col. 5, lines 27ff. The claimed heating the porous pre-form to form a glass object is disclosed in col. 7, lines 18ff, showing a green body being sintered.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 28 and 29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Campos-Loriz et al (US 5,521,129) in view of Ito et al (US 4,830,802). Campos-Loriz discloses a method of making a refractory article. Example one of Campos-Loriz discloses providing fine glass soot particles such as fused silica (400 mesh, 38 microns or less) in combination with coarse glass particles such as aluminum powder (200 mesh), silicon carbide (150 microns), silicon metal powder (less than 600 mesh) or Si powder (45 microns) in a slurry to form a raw batch slip. The raw batch slip is then

Art Unit: 1731

milled. The milled slip is then cast into a porous plaster molds to form green bodies. The green body is then fired wherein the porosity of the green body decreases (see table II) and thus meeting the claimed consolidation step. Campos-Loriz is silent disclosing pressure casting the raw batch slip. However, as noted by Ito in its Prior art section, the prior art previously used non-pressurized slip casting process with a gypsum/plaster molds (such as that used by Campos-Loriz) but have been substituted by pressurized casting process in order to increase the drying efficiency and thus increase productivity (Col. 1, lines 10-23). Thus at the time the invention was made it would have been obvious to a person of ordinary skill in the art to pressure cast the milled slip of Campos-Loriz as taught by Ito in order to increase the drying efficiency and thus increase productivity.

Allowable Subject Matter

Claims 1-6,8, 11-14, 16-27, 30,31,33-34,37-38, and 40 are allowed.

Claims 7, 9, 15, 32, 35, 36, 39 and 41 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, second paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

The following is a statement of reasons for the indication of allowable subject matter: The cited prior art fails to disclose or reasonably suggest the claimed casting of the slurry in a mold having a porous glass substrate in combination with the casting and consolidating steps recited in claim 1, 30, 40 and 41. Additionally, the cited prior art fails to disclose or reasonably suggest disposing a porous preform in a chlorine gas

Art Unit: 1731

atmosphere wherein the porous preform results from a casting and slurry forming steps as recited in claims 32 and 36.

Conclusion


The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. References D-K in PTO-892 have been cited to show the state of the art.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Carlos Lopez whose telephone number is 571.272.1193. The examiner can normally be reached on Mon.-Fri. 8am - 5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Steven Griffin can be reached on 571.272.1189. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0661.

CL


STEVEN P. GRIFFIN
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 1700